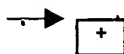


Please type a plus sign (+) inside this box



PTO/SB/18 (08-00)

Approved for use through 10/31/2002. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>		Attorney Docket No. 282.032	
		First Named Inventor DAVID J. BEEBE ET AL	
		Title BIOCHEMICAL SIGNAL TRANSFER USING LIPOSOMES IN A CHANNEL OF A MICROFLUIDIC DEVICE	
		Express Mail Label No. EV313040236US	

APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents.</i>	ADDRESS TO: Mail Stop - Box Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450
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1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17) <i>(Submit an original, and a duplicate for fee processing)</i> 2. <input checked="" type="checkbox"/> Applicant claims small entity status <i>See 37 CFR 1.27</i> 3. <input checked="" type="checkbox"/> Specification [Total Pages <u>17</u>] <i>(preferred arrangement set forth below, MPEP 1503.01)</i> - Descriptive title of the invention - Cross Reference to Related Applications - Statement Regarding Fed sponsored R & D - Reference to sequence listing, a table, or computer program listing appendix - Background of the Invention - Brief Summary of the Invention - Brief Description of the Drawings (if filed) - Detailed Description - Claims - Abstract of the Disclosure 4. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) [Total Sheets <u>5</u>] 5. <input type="checkbox"/> Oath or Declaration [Total Pages <u> </u>] a. <input type="checkbox"/> Newly executed (original or copy) b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63 (d)) <i>(for continuation/divisional with Box 16 completed)</i> i. <input type="checkbox"/> DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63 (d)(2) and 1.33 (b). 6. <input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76 7. <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)	8. <input type="checkbox"/> Nucleotide and/or Amino Acid Sequence Submission <i>(if applicable, all necessary)</i> a. <input type="checkbox"/> Computer Readable Form (CRF) b. <input type="checkbox"/> Specification Sequence Listing on: i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or ii. <input type="checkbox"/> paper c. <input type="checkbox"/> Statement verifying identity of above copies ACCOMPANYING APPLICATION PARTS 9. <input type="checkbox"/> Assignment Papers (cover sheet & document(s)) 10. <input type="checkbox"/> 37 CFR 3.73(b) Statement <input type="checkbox"/> Power of Attorney <i>(when there is an assignee)</i> 11. <input type="checkbox"/> English Translation Document <i>(if applicable)</i> 12. <input type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input type="checkbox"/> Copies of IDS Citations 13. <input type="checkbox"/> Preliminary Amendment 14. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) <i>(Should be specifically itemized)</i> 15. <input type="checkbox"/> Certified Copy of Priority Document(s) <i>(if foreign priority is claimed)</i> 16. <input type="checkbox"/> Request and Certification under 35 U.S.C. 122 (b)(2)(B)(i) – Applicant must attached form PTO/SB/35 or its equivalent 17. <input checked="" type="checkbox"/> Other: <u>Supplement to Transmittal Letter</u>
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16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: /

Prior application information: Examiner Group / Art Unit:

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

17. CORRESPONDENCE ADDRESS

<input type="checkbox"/> Customer Number or Bar Code Label	23598	<input checked="" type="checkbox"/> Correspondence address below
--	--------------	--

Name	Peter C. Stomma				
Address	BOYLE, FREDRICKSON, NEWHOLM, STEIN & GRATZ S.C.				
	250 E. Wisconsin Avenue , Suite 1030				
City	Milwaukee	State	WI	Zip Code	53202
Country	USA	Telephone	(414) 225-9755	Fax	(414) 225-9753

Name (Print/Type) Peter C. Stomma	Registration No. (Attorney/Agent) 36,020
Signature	Date November 4, 2003

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Design, Washington, DC 20231.

{00049094.DOC /}

FEE TRANSMITTAL for FY 2003

Patent fees are subject to annual revision.

Complete if Known

Application Number

Filing Date

First Named Inventor

David J. Beebe et al.

Examiner Name

Group Art Unit

Attorney Docket No.

282.032

TOTAL AMOUNT OF PAYMENT

(\$) 448.00

METHOD OF PAYMENT (check all that apply)
☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None
☒ Deposit AccountDeposit Account Number
Deposit Account Name

50-1170

Boyle, Fredrickson, Newholm, Stein & Gratz S.C.

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments☒ Charge any additional fee(s) during the pendency of this application☒ Applicant Claims Small Entity Status See 37 CFR 1.27☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Large Entity

Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	
118	1,440	218	720	Extension for reply within fourth month	
128	1,960	228	980	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Processing fee under 37 CFR 1.17(q)	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	740	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	

FEE CALCULATION**1. BASIC FILING FEE**

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid
101	770	201	385	Utility filing fee	385
106	340	206	170	Design filing fee	
107	530	207	265	Plant filing fee	
108	770	208	385	Reissue filing fee	
114	160	214	80	Provisional filing fee	

SUBTOTAL (1) (\$) 385

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
27	-20**= 0	7	63
3	-3**= 0		-0-
Multiple Dependent			

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description
103	18	203	9	Claims in excess of 20
102	86	202	43	Independent claims in excess of 3
104	290	204	145	Multiple dependent claim, if not paid
109	86	209	43	**Reissue independent claims over original patent
110	18	210	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$) 63

** or number previously paid, if greater; For Reissues, see above

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3)

(\$)

SUBMITTED BY

Name (Print/Type)

Peter C. Stomma

Registration No.
(Attorney/Agent)

36,020

Complete (if applicable)

Telephone

(414) 225-9755

Signature

Date

November 4, 2003

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NEWHOLM
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INTELLECTUAL PROPERTY LAW

PETER C. STOMMA
DIRECT DIAL: 414-225-1673
PCS@BOYLEFRED.COM

November 4, 2003

Mail Stop - Box Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Re: Utility Patent Application
Inventor(s): David J. Beebe et al.
Title: *Biochemical Signal Transfer Using Liposomes In A
Channel Of A Microfluidic Device*
USPTO Customer Account No.: 23598
Attorney Docket No.: 282.032

Dear Sir:

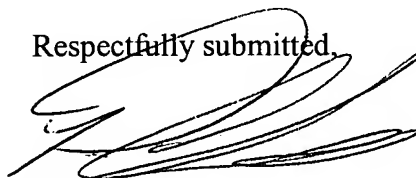
Enclosed is our check in the amount of **\$448.00** in payment of the government filing fee for the enclosed United States patent application, which application includes **10** pages of specification, **27** claims on **6** sheets, **4** Drawings on **5** sheets, and an Abstract of the Disclosure. A Utility Patent Application Transmittal and Fee Transmittal Form PTO/SB/17 (11/00) together with the filing fee are also enclosed. The Declaration and Power of Attorney is not included with the application and will be submitted at a later date.

Applicant is a small entity within the meaning of 37 CFR §§ 1.9 and 1.27 and hereby claims small entity status. The application has Federal Funding No. DOD ARPA F30602-00-2-0570.

Mail Stop - Box Patent Application
Commissioner for Patents
November 4, 2003
Page 2

The Director is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1170.

Respectfully submitted,



Peter C. Stomma
Registration No. 36,020

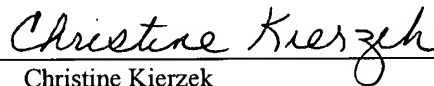
Customer Account - 23598

Certification Under 37 CFR 1.10

Express Mail Label No: **EV313040236US**

Date of Deposit: **November 4, 2003**

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Christine Kierzek

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Of:)
)
DAVID J. BEEBE ET AL.)
)
Filed Herewith)
)
BIOCHEMICAL SIGNAL TRANSFER)
USING LIPOSOMES IN A CHANNEL)
OF A MICROFLUIDIC DEVICE)

SUPPLEMENT TO TRANSMITTAL LETTER

Mail Stop - Box Patent Application
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This application is being filed pursuant to 37 CFR 1.53(b) and (d). The application includes the specification, at least one claim, the drawings, and the filing fee. The inventors are:

David J. Beebe
4647 Tonyawatha Trail
Monona, WI 53716

Jung-Hwa Aura Gimm
1631 Jefferson Street, #2
Madison, WI 53711

and

Arnold E. Ruoho
1209 Brookwood Street
Madison, WI 53711

Jeffrey S. Moore
807 Vista Drive
Savoy, IL 61874

The oath or declaration of the applicants is not included. The declaration will be forwarded promptly upon notification from the U.S. Patent and Trademark Office.

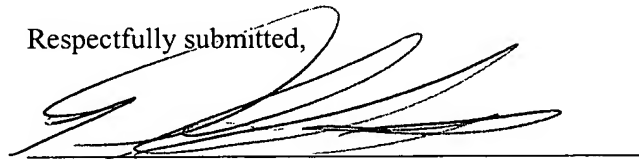
Please address all correspondence to:

PETER C. STOMMA
BOYLE, FREDRICKSON, NEWHOLM, STEIN & GRATZ, S.C.
250 East Wisconsin Avenue, Suite 1030
Milwaukee, Wisconsin 53202

Please address all telephone calls to:

PETER C. STOMMA
Phone No.: (414) 225-9755

Respectfully submitted,



Peter C. Stomma, Reg. No. 36,020

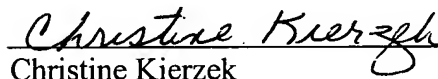
Boyle, Fredrickson, Newholm, Stein & Gratz, S.C.
250 East Wisconsin Avenue, Suite 1030
Milwaukee, WI 53202
(414) 225-9755
Attorney Docket No: 282.032

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Date of Deposit: November 4, 2003

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Christine Kierzek